CASE NO. 3:18-CV-03091-WHA

# **DECLARATION OF PHILIPPE DEPALLENS**

I, Philippe Depallens, declare:

1. I am a Vice President and General Manager at Logitech Inc. ("Logitech") for Audio. I submit this declaration in support of Logitech's opposition to plaintiff's motion for class certification. I have personal knowledge of the facts set out in this declaration and, if called upon to do so, could and would testify competently thereto.

# I. PROFESSIONAL BACKGROUND

- In 1991, I received a Bachelor of Science degree in Telecommunications
   Engineering from the School of Engineering and Management Vaud, Switzerland and received a
   CFEC in Mechanics & Electronics from EPSCIC Ecole professionelle de Lausanne, Switzerland, in 1998.
- 3. I first worked for Logitech from 1992-1999. During that time, I was a software engineer and worked with Logitech's color scanner and joystick/steering businesses.
- 4. In 1999, I left Logitech to co-found and become the VP of Operations for spotlife, a technology company focused on web video services.
- 5. In 2002, Logitech acquired spotlife and I re-joined Logitech as the head of video services. I became the Vice President of webcam engineering in 2005. In 2008, I was made Vice President and General Manager for Ultimate Ears and was tasked with overseeing Logitech's acquisition of Ultimate Ears, which at that time was a start-up company that designed, developed, and manufactured custom in-ear monitors and earphones.
- 6. In 2014, I became the General Manager of the speaker group, which included all of Logitech's speaker product lines, including the Z200. As the Vice President and General Manager, I am responsible for the product portfolio, product development and the profit and losses for desktop speakers. In 2018, the speaker group became the audio group with the addition of the headset and speaker portfolios to my responsibilities. As of September 2018, I became the General Manager for personal video collaboration. Based on the above education and experience, I am very familiar with Logitech's products, the technology underlying them, and speaker technology and mechanics in general.

# II. BACKGROUND OF DESKTOP SPEAKERS

- 7. Logitech sells consumer electronics products that are sought out by consumers because of their great value. Logitech products consistently receive positive consumer and expert reviews. For desktop speakers like the Z200, Logitech is currently the market leader in the U.S., capturing approximately 60% of the market.
- 8. Desktop speakers are unique because they have a significant product life, and they tend to come as an add-on to the purchase of a computer system to upgrade the sound quality of their existing computer. Consumers expect quality sound, but not all consumers are willing to make a large investment in desktop speakers. And with the advent of Bluetooth technology, consumers tend to transition their purchases from desktop speakers to mobile speakers.
- 9. With desktop speakers like the Z200, the goal is to provide consumers with as much sound quality as possible in a small speaker size at an affordable price. When it comes to perceived sound quality, most consumers equate good sound quality with loud bass. Thus, in speaker design, Logitech is always looking at ways to maximize bass delivery while working with a small, desktop speaker box configuration. By definition adding bass is difficult because loud bass requires volume, which is why additional bass is usually provided through a subwoofer.
- 10. Because adding bass in a small volume product is difficult, one of the primary ways it can be accomplished in a desktop speaker is through the inclusion of a passive radiator in addition to the active driver. An active driver is a device that turns electrical signals into sound waves. In addition to having an electrical source, an active driver is usually made up of a cone, a magnet assembly, and a voice coil. An active driver can be designed to deliver a range within the audible frequency range, but a driver the size of the one in the Z200 has a limited ability to deliver lower range tones. A passive driver or passive radiator does not have a magnet and a sound coil; a passive driver or radiator uses air pressure fluctuations inside a speaker enclosure (created by an active driver) to create sound waves as the air fluctuations cause the cone of the passive radiator to begin moving. A passive radiator consists of a cone, suspension, and frame (it does not have a magnet assembly or voice coil). Active drivers and passive drivers or passive radiators are both made up of a cone and can have the same general exterior appearance.

- 11. The mass and stiffness of a passive radiator is chosen so that the passive cone will resonate when the active driver is moving air at a certain frequency or pitch. This tuned frequency is chosen just below the range where the active driver can effectively create sound, thus extending the range of the speaker to create lower notes. A passive radiator creates this additional sound without the need for added energy to the system and cost. A passive radiator can serve, as it does in the Z200, to extend the bass region of a speaker to play lower notes. Essentially, a passive radiator increases the perception of bass in a speaker system.
- 12. Passive radiators are cost-effective means of producing lower notes within a small speaker. A passive driver enables a speaker system to be smaller in size while producing similar quality sound as a larger speaker system. For these reasons, passive radiators serve an important purpose in the Z200 and add value and provide a benefit.
- 13. Plaintiff claims that by adding more drivers to a speaker, a manufacturer can increase the speaker's total acoustic power and the loudness, which plaintiff defines as "sound pressure level," or "SPL." Compl. ¶ 32. While it is true that two identical drivers could deliver 6 dB more SPL than a single driver, doubling up drivers will not provide bass extension, nor will it necessarily provide better sound quality. Two drivers might make the speaker louder, but better sound would come from the addition of bass, which can be provided via a passive radiator.
- 14. Logitech speaker designers consider many parameters and specifications in designing a speaker, with the intent of delivering a quality listening experience encompassing more than just SPL. In addition, frequency balance, bass, treble, power, size, and other factors contribute to the whole listening experience. Logitech's focus is on providing a better overall listening experience rather than just the ability to broadcast the same tones louder. A speaker that can go very loud, but without enough bass support, can be fatiguing or irritating to listen to. Thus, having one active driver and one passive radiator per satellite, rather than two active drivers, can provide for a more balanced and enjoyable listening experience.
- 15. In some speakers, a reflex port or port tube is used instead of a passive radiator to add bass. A port is a hole in the speaker without a cone. A port is not the same thing as a passive radiator and would not create the same level of perceived bass as a passive radiator. A port is not

a preferred design element in the Z200 because of its small size and because a port potentially allows debris, dust, and water to be introduced into the speaker. Another way to add bass to a speaker is through the addition of a subwoofer but that is not possible in the Z200.

#### III. THE EVOLUTION OF THE Z200

16. Logitech first introduced a compact, desktop speaker using passive driver or passive radiator functionality in 2006 with the model X140 (internally known as Beetle). The

design of the X140 was innovative – it was a 2.0 system, with two speaker cones per satellite, one active driver and one passive radiator. The addition of the passive radiator allowed the X140 to have a broader range of sound and bass tones in a size compact enough that it could be used with a personal computer. The suggested retail price of the X140 was \$29.99.



17. In 2012, Logitech undertook a project to update and modernize its

desktop speaker lineup, including redesigning the X140. The refresh and redesign of the X140 became the Z200 (known internally as Jewel), which was released to the marketplace in 2013.

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18. The Z200 is a 2.0 multimedia stereo speaker system, i.e., it has two speaker



cabinets (a left and a right channel) with no separate bass speaker. The speakers are relatively compact (each less than 10 inches high and 3½ inches wide) to fit on a desk, and are designed primarily for use with a personal computer, but they can be used with any device that has a headphone jack input. In addition to use as PC speakers, consumers can use them with televisions, laptop computers, smartphones, tablets and music players. In

fact, because the speakers also have an auxiliary input, two devices can be connected to the speakers at the same time. The speakers also have a headphone plug-in, so a consumer can plug headphones directly into the Z200 and listen from the headphones, without having to disconnect the Z200 speakers from the audio source device.

- 19. The Z200 is designed for and marketed to price-sensitive/value seeking consumers. Like the X140, the suggested retail price for the Z200 is \$29.99. In addition to an affordable price, and features such as on-speaker power, volume and tone controls, on-speaker headphone and auxiliary jack, easy set-up, and a flexible and convenient power supply, the Z200 also has rich, balanced stereo sound with enhanced bass. To deliver the high quality sound and enhanced base in a slim profile with all the other features and do that at a \$29.99 retail price point the Z200 utilized passive radiators. Each satellite had two speaker cones, one an active driver and the other a passive radiator.
- 20. The Z200's passive drivers materially increase its sound quality. The passive radiator delivers the deeper audio tones and enhances the bass effect. The Z200 has a dial on the side that adjusts the volume of the bass. The dial provides more or less power in the bass region to the active driver, which in turn, drives itself and the passive radiator harder or softer. The passive radiator thus provides unique value to the listener that would not be achievable in a

speaker system that did not contain a passive radiator.

21. At times, Logitech referred to the passive radiator as a "pressure" driver in the X140 and as a "passive" driver in the Z200. Passive radiators are also called "drone cones." All of these phrases are shorthand for what is technically known as a passive radiator, and Logitech has used these three phrases interchangeably.

## IV. PASSIVE RADIATOR TECHNOLOGY IS WELL-KNOWN

- 22. Logitech did not invent passive radiators. They have been an important part of speaker technology for decades. Because of their functionality and efficiency and the value that they can add to a speaker system, Logitech has used passive radiators in its products for years, including in the Z207 speaker system. The Z207 is the blue tooth version of the Z200 and it is materially identical to the Z200, including that each satellite has one active driver, and one passive radiator. The Z207's passive radiator is materially identical in function and purpose to the passive radiator in the Z200. Other Logitech speakers utilizing passive radiators include (but are not limited to) the Z4, Z560, Z540, Z340, X620, Logitech Pure-Fi, Logitech V20 Notebook Speakers, Logitech Rechargeable Speaker S715i, and Z523.
- 23. For example, the Z4, a 2.1 speaker system (with a third speaker cabinet holding a subwoofer) that was introduced in 2005, had two passive radiators in each of the satellites. The Z4 looked like this:



- 24. Ultimate Ears (a company acquired by Logitech in 2008) also uses passive radiators in their speaker systems, including: Ultimate Ears BOOM 2; Ultimate Ears BOOM 3; Ultimate Ears WONDERBOOM; Ultimate Ears WONDERBOOM 2; Ultimate Ears MEGABOOM; Ultimate Ears MEGABOOM 3; and Ultimate Ears MEGABLAST. Other examples of competitor products using passive radiators are the Monsoon MM-2000 four-channel speaker system, as well as the Cyber Acoustics CA-3908 2.1 Speaker System.
- 25. It would be very uncommon for a speaker in the Z200's product category to have two active drivers in the same enclosure. None of the Z200's competitor products or any comparable desktop speakers have two active drivers. If a speaker had two drivers, it would likely occur only in a speaker in which the drivers were located on different sides of the speaker and thus broadcast sound in different directions, which is not how a desktop speaker is designed. If there were two identical active drivers in a speaker the size of the Z200 projecting sound in the same direction, they would interfere with each other depending on where the listener is located and the tones emitting from the speakers would be unbalanced.

### **V. Z200 SALES**

- 26. Consumers can purchase the Z200 from both brick-and-mortar stores and through online retailers. The Z200 has been sold to consumers through at least 350 different retailers. The top selling retailers of the Z200 are Amazon, Best Buy, Office Depot/Office Max, Staples, CDW, New Egg, Micro Center, and Fry's Home Electronics. Logitech tracks sales of the Z200 through brick and mortar versus online retailers. As of the fourth quarter of 2019 fiscal year, Z200 units sold through these top-10 retailers comprised 88.5% of total Z200 units sold in the U.S. Sales through any other individual retailer (other than these retailers) accounted for less than 1% of total units sold of the Z200 during this time period.
- 27. Approximately 45% of the sales of the Z200 are through brick and mortar retail stores like Best Buy, Staples, Office Depot/Office Max, Fry's Electronics, and Microcenter. The remaining approximately 55% of sales are online sales through retailers such as Amazon, BestBuy.com, Staples.com, CDW, Dell Computer, and New Egg. Only about 1.5% of Z200 sales are through New Egg and about 1% are through Office Depot/Office Max.com. Attached as

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27 28 Exhibits 1 and 2 [LOG 00014411/12] are true and correct copies of a spreadsheet showing the number of units of the Z200 sold by top retailers, and an excerpt of a spreadsheet showing brickand-mortar and online sales of the Z200 for Best Buy, Staples, and Office Depot.

28. Logitech takes steps to ensure that the confidential and proprietary information contained in Exhibits 1 and 2 is not disclosed outside the company. Logitech derives value from the fact that the information is not accessible to its competitors, who might obtain an unfair advantage from the public disclosure of the information because it could aid them in poaching Logitech's customers and vendors, or strategizing to out-compete Logitech in particular online versus brick-and-mortar store locations, without incurring any cost.

#### VI. **LABELING OF THE Z200**

29. As detailed above, approximately half of Z200 purchases were made in brick-andmortar stores. The primary marketing or advertising materials a consumer might see in a brickand-mortar store regarding the Z200 is the product packaging itself. This is what the Z200 (together with other Logitech speaker products) typically looks like on a shelf at a Staples location:



- 30. There have been two different versions of the Z200 packaging since its release: the initial packaging that was in market beginning in 2013 (in two colors) and a second, updated version of the packaging that was first released in September 2015 and is the current packaging. Because Logitech does not recall old versions of its packaging when it releases new versions, it is entirely possible that retailers could have had Z200s in their inventory with both old and new versions of the packaging and/or sold the Z200 in its old packaging after September 2015. Accordingly, Logitech has no way of knowing which version of the Z200 packaging a consumer would have received during the immediate time period following the label change.
- 31. Of relevance to the issues in this lawsuit, the original packaging contains a statement on the side panel that the Z200 has: "2 2.5" drivers (1 active, 1 passive)" and the back panel that states "2-driver system delivers room-filling sound." Attached as **Exhibits 3 and 4** [LOG\_0000180/181] are true and correct copies of the initial Z200 packaging released in 2013 for the black and white colors of the Z200.
- 32. The updated packaging released in 2015 contains slightly revised language. The new packaging contains the following statement on the back panel: "5 Watts RMS/10 Watts Peak power delivers room-filling sound from the four-driver (two active, two passive) design. Enjoy clear stereo sound with enhanced bass." Attached as **Exhibit 5** [LOG\_00000182] is a true and correct copy of the updated Z200 packaging released in 2015.

### VII. OTHER SALES MATERIALS FOR THE Z200

- 33. The packaging for the Z200 distinguishes between "passive" and "active" drivers. Other sales materials developed by Logitech also make this distinction. For example, Logitech product catalogs from 2014 to 2016 also distinguished between passive and active drivers with respect to the Z200. Attached as **Exhibits 6-11** [LOG\_00000026; LOG\_00000051; LOG\_00011467; LOG\_00000095; LOG\_00000120; LOG\_00000152] are true and correct copies of Logitech product catalogs from 2014 to 2016.
- 34. Logitech also produced marketing product flyers for the Z200 from 2014 and 2015. In these marketing materials, Logitech also distinguished between passive and active drivers with respect to the Z200. Attached as **Exhibits 12-17** [LOG\_00000022; LOG\_00000024;

LOG\_00013943; LOG\_00011791; LOG\_00009247; LOG\_00009257] are Logitech product flyers from 2014 and 2015 that distinguished between passive and active drivers in the Z200.

# VIII. THE Z150 AND COMPETITORS OF THE Z200



35. Logitech also makes a 2.0 speaker set called the Z150 that retails on Amazon.com for \$19.99.

36. The Z150 speaker set is not equivalent to the Z200. For starters, the Z150 is substantially smaller than the Z200. When it comes to sound, the expectation is that size matters and a bigger speaker will produce more bass and have better

sound. That is why the Z200 offers more power and the inclusion of a passive radiator. The Z200's passive radiator produces bass sounds that are richer than the Z150. The Z200 also offers substantially more power than the Z150. The Z200 provides 10 watts of peak power (5 watts RMS power), while the Z150 offers only 6 watts peak power (3 watts RMS power), which means that it is capable of playing much louder with cleaner sound. The Z200 also offers a control for tone, a feature lacking in the Z150.

- 37. In addition, Logitech's internal testing of the Z150 and Z200 show by objective measurements that the sound quality of the Z150 is inferior to that of the Z200. Logitech's acoustics engineers conduct MOS (Mean Opinion Score) for each one of Logitech's speakers and speaker systems. The MOS provides an objection "score" of the acoustics and sound quality. The Z200 MOS score outperforms the Z150 MOS score.
- 38. The products that Logitech considers as competitors of the Z200 are the Sony SRS A3 5 w, the Hercules XPS 2.0 40 slim, 10 watts, and the Trust Tytan 2.0 18w RMS. *See* Plaintiff's Motion for Class Certification, Ex. A, at LOG\_00000328. The price of the Z200 approximates that of its true competitors.

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1	I declare under penalty of perjury under the laws of the United States that the foregoing is
2	true and correct.
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	- 11 - DECLARATION OF PHILIPPE DEPALLENS ISO LOGITECH'S OPPOSITION TO CLASS CERTIFICATION;

CASE NO. 3:18-CV-03091-WHÁ